

Background:

Rural counties have witnessed significant growth in opioid pain reliever misuse and initiation of injection drug use. Consequently, HIV prevalence and hepatitis C (HCV) incidence have increased among certain rural subpopulations. The objective of our analysis was to estimate the availability of services related to HIV and HCV in rural and urban counties across the US.

Methods and Activities:

Geocoded data on organizations that provide testing and treatment services related to HIV and HCV were obtained from the National Prevention Information Network (NPIN). County-level rurality was defined using the National Center for Health Statistics 2013 Urban-Rural Classification Scheme for Counties, which categorizes counties into six mutually exclusive groups: large central metro, large fringe metro, medium metro, small metro, micropolitan, and noncore (Figure 1). Analyses are presented across the six-level rurality classification scheme and by an aggregated two-level urban/rural variable (urban: large central metro, large fringe metro, medium metro, and small metro; rural: micropolitan and noncore). Geocoded data were also used to determine the US Census region in which organizations were located.

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Table 1: Percentage of Counties with HIV and HCV-Related Services in the NPIN Organizations Database, 2019, by Rurality

	HIV services	HIV & HCV-related services	HIV medical treatment	HIV testing	HIV prevention education	HCV medical treatment	HCV testing	HCV prevention education
Urban	91%*	91%*	39%*	88%*	88%*	31%*	68%*	71%*
U1	100%	100%	99%	100%	100%	97%	100%	100%
U2	90%	91%	30%	88%	86%	22%	66%	64%
U3	91%	91%	43%	90%	90%	33%	66%	73%
U4	89%	89%	34%	85%	86%	25%	65%	70%
Rural	74%	75%	9%	69%	71%	6%	34%	46%
R1	89%	89%	17%	85%	87%	10%	48%	58%
R2	67%	68%	5%	61%	63%	3%	27%	40%

* Comparison to rural counties, Chi-square p-value <0.05

a. Nine HIV services include: HIV prevention education, Pre-Exposure Prophylaxis (PrEP), Post-Exposure Prophylaxis (PEP), HIV medical treatment, PrEP navigation, conventional blood and oral HIV testing, and rapid blood and oral HIV testing.

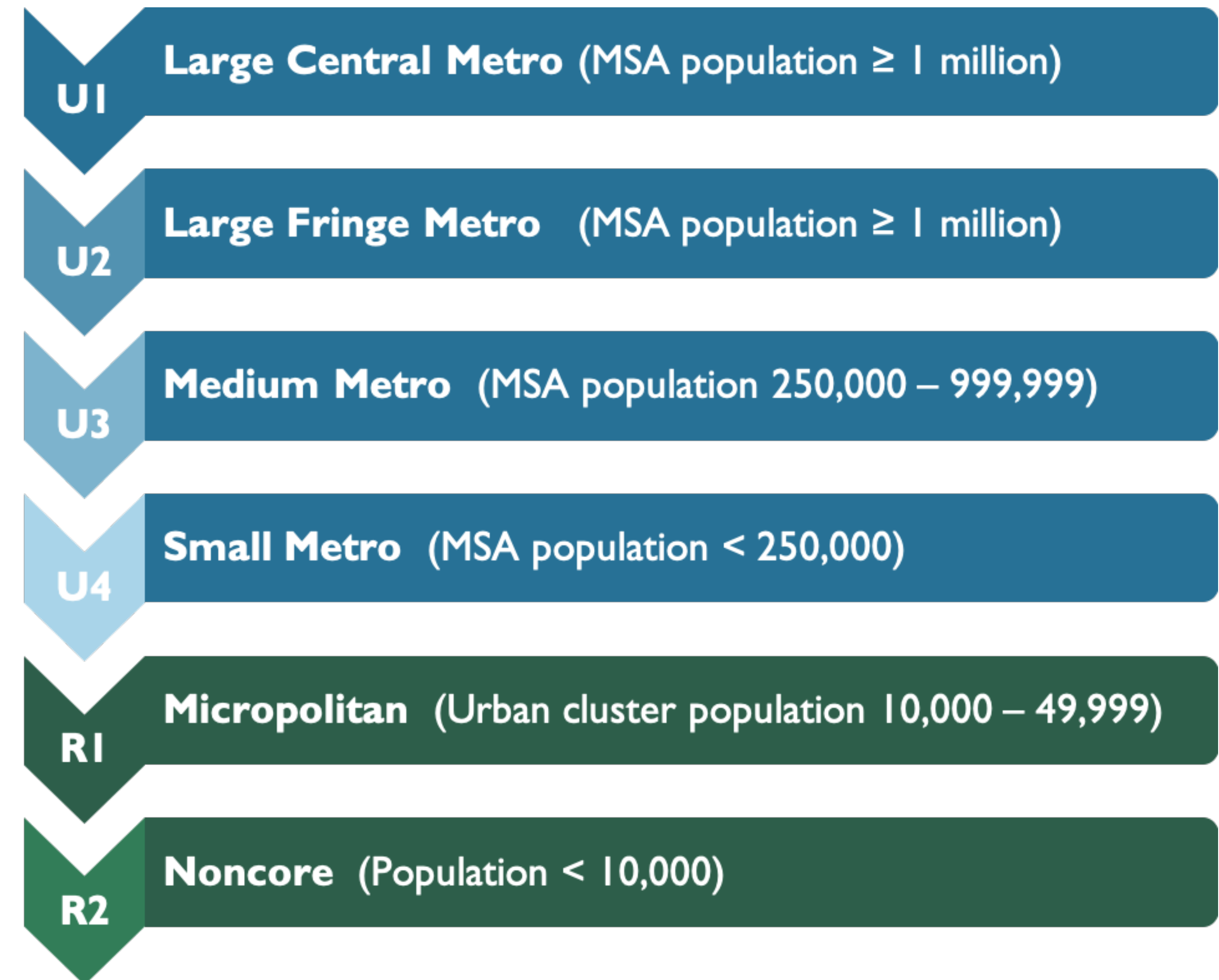
b. Sixteen HIV & HCV-related services include: hepatitis prevention education, HCV medical treatment, and testing services for chlamydia, gonorrhea, syphilis, herpes, and HCV (in addition to nine HIV Services).

Table 2: Percentage of Counties with HIV and HCV-Related Services in the NPIN Organizations Database, 2019, by Rurality and Census Region

U – Urban R – Rural		Northeast	Midwest	South	West
		HIV services	U 97%	81%*	94%*
	R	94%	61%	84%	73%
HIV & HCV-related services	U	97%	81%*	94%*	92%*
	R	94%	63%	84%	73%
HIV medical treatment	U	68%*	26%*	34%*	61%*
	R	31%	5%	9%	14%
HIV testing	U	95%	75%*	93%*	90%*
	R	92%	49%	84%	71%
HIV prevention education	U	95%	76%*	92%*	91%*
	R	91%	56%	83%	69%
HCV medical treatment	U	57%*	20%*	26%*	49%*
	R	16%	3%	6%	8%
HCV testing	U	81%*	62%*	65%*	82%*
	R	68%	26%	32%	50%
HCV prevention education	U	85%*	59%*	71%*	83%*
	R	71%	32%	54%	51%

* Comparison to rural counties within region, Chi-square p-value <0.05

Figure 1: Six-Level Classification Scheme for Counties, National Center for Health Statistics, 2013



Findings

- Analyses of the availability of HIV and HCV-related services in 2019 show that compared with urban counties, a smaller proportion of rural counties had organizations that provided HIV and HCV testing, and treatment services (Table 1). For example, organizations that provided HIV testing services were present in **88%** of urban counties compared with **69%** of rural counties, and HCV testing services were available in **68%** of urban counties compared with **34%** of rural counties.
- In the Midwest, South, and West Census regions, the availability of HIV- and HCV-related services in rural counties was lower for each service examined compared with urban counties in the same Census region (Table 2). In the Northeast, however, rural-urban differences were not statistically significant for HIV services, HIV and HCV-related services, HIV testing, and HIV prevention education.

Lessons Learned

- Geocoded data on organizations listed in NPIN can be easily obtained from the Centers for Disease Control and Prevention, and most locations mapped to a valid county within the state.
- Examining the percentage of free services by rural-urban county would have strengthened our assessment of availability.

Challenges and Limitations

The NPIN Organizations Database may not reflect the totality of services available in a county. For example, private physicians and practices are not included in the database but can provide services for HIV/AIDS, viral hepatitis, STDs, or tuberculosis. Additionally, we did not limit our analysis to organizations that had a sliding scale fee structure or provided free services; thus, although HIV and HCV services may be available in a county, they may not be easily accessible, especially to low-income persons.